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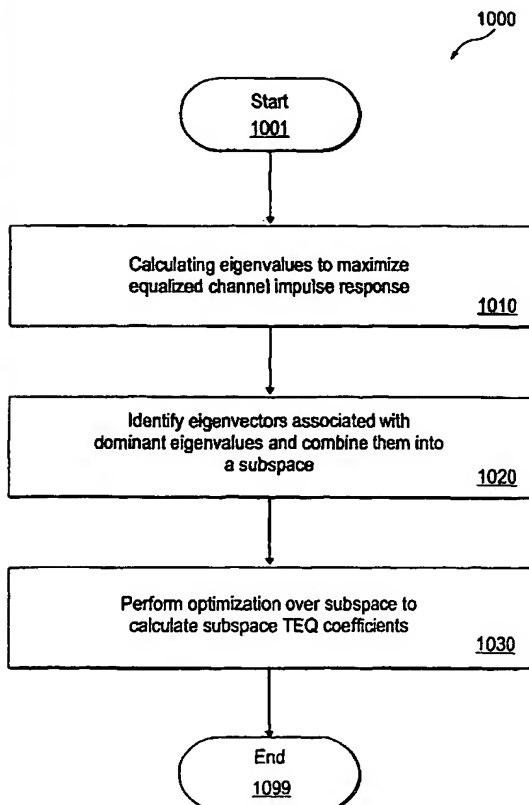
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(54) Title: A METHOD AND SYSTEM FOR PROVIDING A TIME EQUALIZER FOR MULTILINE TRANSMISSION IN COMMUNICATION SYSTEMS



(57) Abstract: A method and system for multiline transmission in communications systems are described. Eigenvalues are calculated to maximize equalized channel impulse response (1010). Eigenvectors associated with dominant eigenvalues are identified (1020). The eigenvectors are combined into a subspace. Optimization is performed over the subspace to calculate subspace time equalizer coefficients (1030).



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## INTERNATIONAL SEARCH REPORT

International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : H04L 27/01

US CL : 375/232

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 375/232,350,341,346,348,350; 333/18,28R,166; 364/724.19, 724.2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST (USPAT, EPO, JPO, DERWENT, IBM\_TDB), IEEEExplore**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
x	US 5,870,432 A (KERCKHOVE) 09 February 1999 (09.02.1999), col.12, lines 48-57, Fig.4.	1
A	US 6,396,886 B1(KAPOOR) 28 May 2002 (28.05.2002), Fig.4b	1
A	US 6,341,298 B1(ILANI) 22 January 2002 (22.01.2002), col.12.	1
A	US 4,408,332 A (SARI) 04 October 1983 (04.10.1983), Figs. 2a-3b.	1

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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